

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

Applicant/Contact name and address: D & M Ranch Inc.
PO Box 149
Stanford, MT 59479

1. *Type of action:* Application to Change a Water Right 30027838-41S
2. *Water source name:* Unnamed Tributary of Wolf Creek
3. *Location of project:* SE Section 12 T16N, R11E, Judith Basin County
4. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

The applicant proposes to change the Purpose, Place of Use, and Storage associated with Provisional Permit 41S-107298-00. They plan to retire 25.8 acres of permitted irrigation and use the estimated 22.8 AF reduction in irrigation volume to fill and maintain a lined 17.5 acre-foot (AF) off-stream reservoir for the purpose of a fishery. The fishpond will be located in the SW SE SE Section 12 T16N R11E. The volume used for irrigation will change from 333.2 AF to 310.4 AF. Permit 41S-107298-00 currently lists a maximum volume of 338.75 AF for purposes of Irrigation, Stock, and Wildlife/Waterfowl. An additional 0.75 AF will be pumped from a 300 foot well to the reservoir to offset the remaining portion of the expected 6.1 AF annual evaporative loss incurred outside the irrigation season.

5. *Agencies consulted during preparation of the Environmental Assessment:*
(include agencies with overlapping jurisdiction)

MT Dept. of Environmental Quality Website - TMDL 303d listing
MT. National Heritage Program Website - Species of Concern
USDI Fish & Wildlife Service Website - Endangered and Threatened Species Wheatland County, MT
MT State Historic Preservation Office - Archeological/Historical Sites
USDA Natural Resources Conservation Service – Web Soil Survey

Part II. Environmental Review

1. Environmental Impact Checklist:

<p>PHYSICAL ENVIRONMENT</p>

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

Determination: Low Likelihood of Impact

The tributary of interest has not likely been assessed and Wolf Creek is not currently classified as dewatered by the Montana Fish, Wildlife & Parks. The applicant proposes to retire 25.8 acres of center pivot irrigation to offset the water use that will be associated with the reservoir for a fishery. An annual evaporative loss of 6.08 AF has been estimated by the applicant. They are requesting to use 17.5 AF to fill the reservoir and 5.3 AF to cover the larger fraction of the annual evaporative loss. The additional 0.75 AF needed to account for the remainder of the estimated total evaporative loss, will be pumped from a 300 foot well. Because the applicant will offset the water consumed by the fishery purpose by ceasing to use 22.8 AF of irrigation water, the project is not expected to have a significant impact on water quantity.

Water quality - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

Determination: Low Likelihood of Impact

This unnamed tributary has not likely been assessed; however Wolf Creek has been designated as needing a TMDL plan. The 2006 303d listing identifies impairments to aquatic life & warm water fishery uses. Probable causes are iron, selenium, and total dissolved solids. Probable sources are listed as crop production, natural sources or source unknown. There is a low likelihood that the requested project will negatively affect water quality in the Wolf Creek drainage, as they will be reducing crop production by 25.8 acres.

Groundwater - Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

Determination: Minor Impact

The elevation of the localized groundwater table may decrease slightly in the area due to the addition of the lined 17.5 AF reservoir and its associated evaporative loss. Water that could have naturally returned to the underlying aquifer will now be trapped by the liner in the reservoir. The fact that the applicant will reduce the consumptive place of use for irrigation by 25.8 acres should make this decrease insignificant; though the ground water recharge zone would likely shift locations.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: Minor Impact

An 11-foot long 20-inch diameter corrugated metal pipe with a slide gate is used to divert water from the unnamed tributary to the existing 4.8 AF pond. Water is then pumped from the pond to the pivot system at a rate of 500 gallons per minute. An 8-inch PVC outlet pipe with a control gate will be added to the existing reservoir in order to convey water to the new 17.5 AF proposed reservoir. The proposed reservoir will be lined with bentonite to prevent seepage loss. The new pond will not have a drainage device installed; water levels will be controlled exclusively by regulating inflows to the reservoir.

As stated in the previous section of this assessment, the addition of a 17.5 AF lined reservoir will likely modify the flow regime associated with recharge to the localized ground water table in the underlying aquifer. However, the impacts to Wolf Creek are expected to be minor given the relatively small size of the drainage area behind the impound structures.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any “species of special concern,” or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or “species of special concern.”*

Determination: Low Likelihood of Impact

The Montana National Heritage Program lists no species as Species of Concern within Township 16 North Range 11 East. The USDI Fish & Wildlife Service Website shows that Judith Basin County has 2 species listed as threatened; the Bald Eagle and the Canada Lynx. No adverse impact to the habitat for these two threatened species is anticipated.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: Low Likelihood of Impact

There are no known wetlands associated with this application. The USDI Fish & Wildlife Service – Wetlands Online Mapper has no data available for the project location.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Low Likelihood of Impact

The project involves the addition of a 17.5 AF reservoir for a fishery purpose. The reservoir will be 2.8 acres total surface area. The total evaporative loss estimated for this reservoir is 6.1 AF annually. The applicant will file a Notice of Completion of Groundwater Development (Form 602) for a 300 foot well that will supply 0.75 AF to cover the remainder of the evaporative loss not covered by the retirement of 22.8 AF of irrigation water. No adverse impacts are expected.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: Low Likelihood of Impact

The two predominant soil classifications associated with this area are the Gallatin clay loam and the Gallatin/Raynesford loam. These alluvial soil types are very limited in their use for a reservoir due to seepage concerns; however the applicant plans on lining the pond with bentonite to reduce the associated seepage loss. The sodium adsorption ratio is 0.0 signifying a low likelihood of impacts from saline seep.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: Low Likelihood of Impact

While normal construction disturbance may encourage the establishment of noxious weeds, the disturbance should be localized and range management practices should keep them under control. It is the responsibility of the property owner to control noxious weeds on their property.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: Low Likelihood of Impact

It is unlikely air quality would be impacted; as this project would have no emissions other than normal construction activities.

HISTORICAL AND ARCHAEOLOGICAL SITES - *Assess whether there will be degradation of unique archaeological or historical sites in the vicinity of the proposed project.*

Determination: Low Likelihood of Impact

There are no known archeological or historical sites in the area of interest; a cultural resource inventory is unwarranted at this time. This area is currently irrigated crop land.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No other demands have been identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: Low Likelihood of Impact

No local environmental plans or goals have been identified.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: Low Likelihood of Impact

The project is consistent with historic land use in the area and would not place additional unreasonable impacts on access or quality of recreational activities.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: Low Likelihood of Impact

Since its introduction in 1999, West Nile virus has become a potential threat in many areas of the United States. In 2006, Montana State University research found that 4 in every 1000 mosquitoes captured on the Milk River near Malta, MT were infected with West Nile. Mosquito habitat development has been associated with standing water containing debris and vegetation; similar to an in-flow regulated reservoir environment. Proper weed management and pond maintenance can help to control the conditions required for larva growth, thus making the impacts associated with vegetative debris and sluggish movement of water insignificant.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*

Yes___ No X. *If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: No regulatory impacts are known.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? NONE

(b) Local and state tax base and tax revenues? NONE

- (c) Existing land uses? **NONE**
- (d) Quantity and distribution of employment? **NONE**
- (e) Distribution and density of population and housing? **NONE**
- (f) Demands for government services? **NONE**
- (g) Industrial and commercial activity? **NONE**
- (h) Utilities? **NONE**
- (i) Transportation? **NONE**
- (j) Safety? **NONE**
- (k) Other appropriate social and economic circumstances? **NONE**

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts – Beneficial impacts could occur to the physical environment due to the addition of riparian habitat.

Cumulative Impacts – No cumulative impacts are anticipated.

3. *Describe any mitigation/stipulation measures:*

No conditions for mitigation/stipulation have been identified.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

NO ACTION ALTERNATIVE

No action alternative: deny the application. This alternative would result in none of the benefits to the applicant. The No Action Alternative would supply none of the benefits related to positive environmental enhancements proposed by the project and would result in continued agriculture production on 25.8 acres.

PART III. Conclusion

1. *Preferred Alternative*

The preferred alternative is the proposed alternative.

2. *Comments and Responses*

None Received.

3. Finding

Based on the significance criteria evaluated in this EA, is an EIS required?

NO

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

Name of person(s) responsible for preparation of EA:

Name: Douglas Mann

Title: Water Resources Specialist - LRO

Date: 11/15/2007